

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT STATIONARY SOURCE COMPLIANCE DIVISION PERMIT APPLICATION PROCESSING AND CALCULATIONS	PAGES 11	PAGE 1
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A/N 537512- Permit to Operate (PO no PC)
A/N 537513-Permit to Construct/Operate (Alteration/Modification)
A/N 537514-Permit to Construct/Operate (Alteration/Modification)

Applicant USA Waste of Cal (El Sobrante Landfill)

Mailing Address 10910 Dawson Canyon Road
Corona, CA 92883

Equipment Location 10910 Dawson Canyon Road
Corona, CA 92883

Equipment Description
APPLICATION 537512, FACILITY ID 113674

LANDFILL GAS FLARING SYSTEM CONSISTING OF:

1. KNOCKOUT VESSEL/GAS FILTER, ENDUSTRA, 2'-6" DIA. BY 6'-1" HIGH, 5,500 CFM CAPACITY.
2. SHUTOFF VALVES.
3. BLOWER, HOUSTON SERVICE INDUSTRIES, 200 HP, 5,500 SCFM CAPACITY, COMMON TO THE FLARING SYSTEM AND LANDFILL GAS FIRED INTERNAL COMBUSTION ENGINES.
4. TWO (2) BLOWERS, HOUSTON SERVICE INDUSTRIES, MODEL 14104, EACH 200 HP, 5,500 SCFM VARIABLE FREQUENCY DRIVE.
5. FLARE (NO. 3), JOHN ZINK, MODEL ZULE, 13' DIA. BY 60' HIGH, AUTOMATIC AIR DAMPER, PROPANE PILOT, 100 HP COMBUSTION AIR BLOWER, FOUR SOURCE TEST PORTS.
6. TWO PROPANE TANKS, 8.5 GALLONS EACH.

APPLICATION 537513, FACILITY ID 113674

ALTERATION OF:

LANDFILL GAS COLLECTION SYSTEM CONSISTING OF:

1. PHASE I-II LANDFILL GAS COLLECTION SYSTEM:
 - A. TWENTY-FOUR (24) VERTICAL WELLS, 4" AND 6" DIA. AT VARYING DEPTHS RANGING FROM 20 FEET TO 170 FEET.
2. PHASE III-V LANDFILL GAS COLLECTION SYSTEM:
 - A. SIX (6) HORIZONTAL COLLECTOR LINES, HDPE PIPING, VARYING DIAMETERS RANGING FROM 6" 12" DIA. WITH VARYING LENGTHS FROM 880 FEET TO 1,220 FEET.
 - B. FORTY-SIX (46) VERTICAL WELLS, 4" AND 6" DIA. AT VARYING DEPTHS RANGING FROM 13 FEET TO 200 FEET.

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3. PHASE VI-X LANDFILL GAS COLLECTION SYSTEM:
 - A. FOUR (4) HORIZONTAL COLLECTOR LINES, HDPE PIPING, 6" DIA. WITH VARYING LENGTHS FROM 225 TO 1,900 FEET.
 - B. FORTY-THREE (43) VERTICAL WELLS, 4" AND 6" DIA. AT VARYING DEPTHS RANGING FROM 25 FEET TO 200 FEET.
4. GAS TRANSMISSION HEADER AND LATERAL PIPING SYSTEM SERVING THE VERTICAL AND HORIZONTAL WELLS TO DIRECT THE LANDFILL GAS TO THE PROCESSING/CONTROL SYSTEM.

BY ADDITION OF:

1. TWO HUNDRED (200) ADDITIONAL VERTICAL WELLS AS NEEDED.
2. FIFTY (50) ADDITIONAL HORIZONTAL COLLECTORS AS NEEDED.

AND/OR REMOVAL OF:

1. SEVENTY-FIVE (75) VERTICAL WELLS AS NEEDED.
2. TWENTY-FIVE (25) HORIZONTAL COLLECTORS AS NEEDED.

APPLICATION 537514, FACILITY ID 113674

ALTERATION OF:

LANDFILL GAS CONDENSATE, LEACHATE, GROUNDWATER AND SUBDRAIN WATER COLLECTION, STORAGE AND TREATMENT SYSTEM CONSISTING OF:

1. CONDENSATE COLLECTION SYSTEM.
 - A. FOUR (4) CONDENSATE SUMPS.
 - B. CONDENSATE TANK (CHS-19), UNDERGROUND, EPOXY LINED CARBON STEEL, 300 GALLON CAPACITY, 2'-6" DIA. BY 8' HIGH, LOCATED WITHIN OPEN FIBERGLASS TANK AT THE FLARE STATION, COLLECTING CONDENSATE FROM PARTICULATE FILTER/MOISTURE KNOCKOUT AND OTHER SOURCES, VENTED TO GAS HEADER.
 - C. CONDENSATE COLLECTION TANK (T-101), UNDERGROUND, DOUBLE WALLED, FIBERGLASS REINFORCED PLASTIC, 1000 GALLON CAPACITY, 4' OUTSIDE DIA. BY 11' LONG, VENTED TO GAS HEADER.
2. LCRS COLLECTION SYSTEM.
 - A. FIVE (5) SUMPS.
 - B. LEACHATE LINES SERVING THE LCRS SYSTEM.
3. GROUNDWATER/SUBDRAIN WATER COLLECTION SYSTEM.
 - A. GROUNDWATER EXTRACTION WELLS.
 - B. SUBDRAIN LINES SERVING GROUNDWATER SYSTEM.
4. LIQUIDS STORAGE SYSTEM.

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- A. TANK (T-104A), LEACHATE, ABOVEGROUND, 13,000 GALLON CAPACITY, 12" DIA. BY 17'-2" HIGH, VENTED TO GAS HEADER.
 - B. TANK (T-104B), LEACHATE, ABOVEGROUND, 13,000 GALLON CAPACITY, 12'-0" DIA. BY 17'-2" HIGH, VENTED TO GAS HEADER.
 - C. TANK (T-104C), LEACHATE, ABOVEGROUND, 5,000 GALLON CAPACITY, 10'-0" DIA. BY 8'-10" HIGH, VENTED TO GAS HEADER.
 - D. TANK (T-104C), ABOVEGROUND, CROSS LINKED POLYETHYLENE, 13,000 GALLON CAPACITY, 12'-0" DIA. BY 17'-2" HIGH, VENTED TO GAS HEADER, TO BE INSTALLED WHEN NEEDED TO REPLACE T-104C (5000 GALLON).
- 5. ASSOCIATED PUMPS, DRAIN LINES AND PIPING.
 - 6. UP TO FOUR TEMPORARY TANKS, BAKER TYPE.

BY ADDITION OF:

- 1. ONE (1) CONDENSATE SUMP. [1. CONDENSATE COLLECTION SYSTEM ITEM A.]
- 2. FIVE (5) OPTIONAL CONDENSATE SUMPS. [1. CONDENSATE COLLECTION SYSTEM ITEM B.]
- 3. FIVE (5) OPTIONAL SUMPS. [2. LCRS COLLECTION SYSTEM ITEM B.]
- 4. SUBDRAIN LIQUIDS COLLECTION TANK (T-101), UNDERGROUND, DOUBLE WALLED, FIBERGLASS REINFORCED PLASTIC, 1000 GALLON CAPACITY, 4' OUTSIDE DIA. BY 11' LONG, VENTED TO GAS HEADER. [3. GROUNDWATER/SUBDRAIN WATER COLLECTION SYSTEM ITEM C.]
- 6. TANK (T-104A), LEACHATE AND CONDENSATE, ABOVEGROUND, 13,000 GALLON CAPACITY, 12" DIA. BY 17'-2" HIGH, VENTED TO GAS HEADER. [4. LIQUIDS STORAGE SYSTEM ITEM A.]
- 7. TANK (T-104B), LEACHATE AND CONDENSATE, ABOVEGROUND, 13,000 GALLON CAPACITY, 12'-0" DIA. BY 17'-2" HIGH, VENTED TO GAS HEADER. [4. LIQUIDS STORAGE SYSTEM ITEM B.]
- 8. TANK (T-104C), LEACHATE AND CONDENSATE, ABOVEGROUND, 13,000 GALLON CAPACITY, 12'-0" DIA. BY 17'-2" HIGH, VENTED TO GAS HEADER. [4. LIQUIDS STORAGE SYSTEM ITEM C.]
- 9. UP TO FOUR TEMPORARY TANKS.

BY REMOVAL OF:

- 1. CONDENSATE COLLECTION TANK (T-101), UNDERGROUND, DOUBLE WALLED, FIBERGLASS REINFORCED PLASTIC, 1000 GALLON CAPACITY, 4' OUTSIDE DIA. BY 11' LONG, VENTED TO GAS HEADER.
- 2. TANK (T-104A), LEACHATE, ABOVEGROUND, 13,000 GALLON CAPACITY, 12" DIA. BY 17'-2" HIGH, VENTED TO GAS HEADER.

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3. TANK (T-104B), LEACHATE, ABOVEGROUND, 13,000 GALLON CAPACITY, 12'-0" DIA. BY 17'-2" HIGH, VENTED TO GAS HEADER.
4. TANK (T-104C), LEACHATE, ABOVEGROUND, 5,000 GALLON CAPACITY, 10'-0" DIA. BY 8'-10" HIGH, VENTED TO GAS HEADER.
5. TANK (T-104C), ABOVEGROUND, CROSS LINKED POLYETHYLENE, 13,000 GALLON CAPACITY, 12'-0" DIA. BY 17'-2" HIGH, VENTED TO GAS HEADER, TO BE INSTALLED WHEN NEEDED TO REPLACE T-104C (5000 GALLON).
6. UP TO FOUR TEMPORARY TANKS, BAKER TYPE.

Background/Process Description

The above applications were submitted on May 4, 2012 for PO no PC (A/N 537512) and Alteration/Modification (A/Ns 534513 & 537514) application types. A/N 537512 was submitted for a landfill gas (LFG) flaring system. The existing flaring system consists of a single flare (flare no. 3) is permitted under Permit G5700, A/N 499536. The blower which is common to the flaring system and the LFG fired IC engines was replaced with a functionally equivalent blower and the two propane tanks were replaced with larger propane tanks.

A/N 537513 was submitted for a landfill gas collection system. The existing LFG collection system is permitted under Permit F91988, A/N 463733. Due to decreasing LFG generation many LFG vertical wells and horizontal collectors were removed. The number of vertical wells and horizontal collectors are to be updated to reflect current and future requirements. The landfill gas is collected from the landfill by the gas collection system via blower(s). The gas is then directed to the existing flaring system or LFG ICEs for combustion.

A/N 537514 was submitted for a landfill gas condensate, leachate, groundwater, and subdrain water collection, storage and treatment system. The existing liquid collection, storage, and treatment system is currently permitted under Permit F91987, A/N 463732 consists of a condensate collection system, LCRS collection system, groundwater/subdrain water collection system, and liquids storage system and associated pumps and temporary tanks. The proposed changes to this equipment include the addition of a condensate sump, five optional condensate sumps, and five optional sumps for the LCRS collection system, as well as, the conversion of a condensate tank into a subdrain liquids tank, and three leachate tanks into leachate and condensate tanks.

The operation schedule the above listed equipment is 24 hours/day, 365 days/year. The equipment is not located within 1000 feet from a school. There are no Notices to Comply, Notices of Violations, or complaints issued against the above facility within the past two years.

USA Waste of California Inc. (USA Waste) owns and operates El Sobrante Landfill (ESL) under an agreement with the County of Riverside. ESL is an active municipal solid waste (MSW) disposal facility that began accepting waste in the Phase I are of the landfill on July 23, 1986. ESL is currently permitted as a Class III (non-hazardous) landfill, which can accept 70,000 tons/week with a 16,054 tons/day maximum. The current area of Phases 1 through IX is 468 acres (per 6/3/2013 email).

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Emission Calculations for A/N 534512 (LFG Flaring System)

There is no increase in emissions due to the change of conditions. The emissions associated with Flare No.3 are replicated from the previous application of A/N 499536 (A/N 457117). There is a total emission decrease due to the removal of Flare No. 1 and Flare No. 2 during the previous permit revision. Flare No. 3 has a heat input of 167.15 mmBtu/hr and a LFG inlet flow of 6325 scfm (440.45 Btu/scf). R1 = R2, unless otherwise noted.

Criteria Pollutant Emissions for Flare No. 3

Emissions were based on engineering evaluation application A/N 457117, John Zink manufacturer emission factors (CO & NOx), and Flares No. 1 and 2 source test data from 2003 through 2006 (PM10, ROG, & SOx).

CO = 0.06 lbs/mmBtu x 167.15 mmBtu/hr = 10.03 lbs/hr = 266.06 lbs/day(NSR)
Maximum monthly emission: 10.03 lbs/hr x 24 hr/day x 365 day/yr x yr/12month = 7322 lbs/month

NOx = 0.025 lbs/mmBtu x 167.15 mmBtu/hr = 4.18 lbs/hr = 101.71 lbs/day(NSR)
Maximum monthly emission: 4.18 lbs/hr x 24 hr/day x 365 day/yr x yr/12month = 3051 lbs/month

PM10 = 8.99 lb/ 1E6cf x 6325 scfm/min x 60min/hr = 3.41 lbs/hr = 82.98 lbs/day(NSR)
Maximum monthly emission: 3.41 lbs/hr x 24 hr/day x 365 day/yr x yr/12month = 2489 lbs/month

ROG R1 = 41,000 ppm x lbmole/379E6scf x 16 lbs/lbmole x 6325 scfm x 60min/hr = 656.87 lbs/hr
R2 = 656.87 lbs/hr x (1.0-0.99) = 6.57 lbs/hr = 159.87 lbs/day(NSR)
Maximum monthly emission: 6.57 lbs/hr x 24 hr/day x 365 day/yr x yr/12month = 4796 lbs/month

SOX = 100 ppm H2S x lbmoleH2S/379E6scf x lbmoleSO2/lbmoleH2S x 64 lbsSO2/lbmoleSO2 x 6325scfm x 60min/hr = 6.41 lbs/hr = 155.98 lbs/day(NSR)
Maximum monthly emission: 6.41 lbs/hr x 24 hr/day x 365 day/yr x yr/12month = 4679 lbs/month

GHG Emissions for Flare No. 3

CO2: Assume 52.07 kgCO2/mmBtu (The Climate Registry-LFG)
52.07 kgCO2/mmBtu x 2.2046 lbs/kg x 167.15 mmBtu/hr x 0.99 = 18,995.86 lbs/hr
Maximum monthly emission: 18,995.96 lbs/hr x 24 hr/day x 365 day/yr x yr/12month = 13,866,977.8 lbs/month

CH4: Assume 0.0032 kg/mmBtu (The Climate Registry-Industrial Biogas) & 99% of CH4 oxidized
Due to LFG combustion: 0.0032 kg/mmBtu x 2.2046 lbs/kg x 167.15 mmBtu/hr = 1.18 lbs/hr
Due to incomplete oxidation: 6325 scfm x 0.04216 lb/scf x 44% x (1-0.99) = 70.40 lbs/hr
Total: 71.58 lbs/hr
Maximum monthly emission: 71.58 lbs/hr x 24 hr/day x 365 day/yr x yr/12month = 52,253.4 lbs/month

N2O: Assume 0.00063 kg/mmBtu (The Climate Registry-Industrial Biogas)
0.00063 kg/mmBtu x 2.2046 lbs/kg x 167.15 mmBtu/hr = 0.23 lbs/hr
Maximum monthly emission: 0.23 lbs/hr x 24 hr/day x 365 day/yr x yr/12month = 167.9 lbs/month

Emission Calculations for A/N 537513 (LFG Collection System)

There is no emission increase from this system. The landfill gas collection system is vented to the flare or engines for combustion.

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Emission Calculations for A/N 537514 (LFG Condensate, Leachate, Groundwater and Subdrain Water Collection, Storage and Treatment System)

There is no emission increase from this system. The subdrain liquids collection tank and three leachate and condensate tanks are vented to the landfill gas collection system which is vented to the flare or engines for combustion.

Rules Evaluation

- Rule 212: Rule 212 (c)(1)- There is no school within 1000 feet of the facility.
Rule 212 (c)(2)- There is no increase of emissions.
Rule 212(c)(3)(A)(i)- There is no increase of emissions.
Public Notice is not required.
- Rule 401: Visible Emissions
No violations are expected, limits are listed under Rule 401(b)(1).
- Rule 402: Nuisance
Nuisance is not expected with proper operation, monitoring and maintenance. Based on previous operation of the facility for the last two years, compliance is expected. One non-odor related complaint has been received in the last two years against the facility.
- Rule 407: Liquid and Gaseous Air Contaminants
Rule 407 (a)(1)- CO < 2000 ppmvd. Compliance is expected.
- Rule 409: Combustion Contaminants
≤ 0.1 grain/cu. ft. @12% CO₂, standard conditions averaged over a minimum of 15 minutes. Compliance is expected.
- Rule 431.1: Sulfur Contents of Gaseous Fuels
Rule 431.1(c)(1)- Natural gas contains ≤ 16 ppmv sulfur compounds as H₂S.
Rule 431.1(c)(2)- Landfill gas contains ≤ 150 ppmv sulfur compounds as H₂S.
Compliance is expected.
- Rule 1150.1 Control of Gaseous Emissions from Municipal Solid Waste Landfills
Rule 1150.1(d)(1)(A)- Gas collection & control system shall be designed to handle maximum expected gas flow rate from entire area of MSW landfill that requires control to minimize migration of subsurface gas to comply with (d)(10), and collect gas at an extraction rate to comply with (d)(11-12). 2006 IPCC Guidelines for National GHG Inventories, Chapter 3 IPCC Model shall be used to calculate maximum expected gas generation flow rate from the landfill. The LFG generated flow is currently averaging 4,400 scfm @ 42% methane May 2013 and is projected to be a maximum of 6,486 scfm @ 50% methane by 2017. The capacity of the control/treatment system is 7218 scfm @ 50% methane. The capacity of the LFG collection and control system are designed to handle maximum expected gas flow rate from the landfill for at least the next 4 years.
Rule 1150.1(d)(1)(B)- The design plan shall conform with active collection systems in 40 CFR 60.759 or Executive Officer approved alternative.

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Rule 1150.1(d)(1)(C)- Design plan shall meet (d)(1)(C)(i-iv) or provide the collection and sale of collected MSW landfill emissions as in (d)(1)(C)(v).

Rule 1150.1(d)(1)(C)(i)- Route all LFG to control system to reduce methane by at least 99% by weight and reduce NMOC by at least 98% by weight or reduce the outlet of NMOC concentration to less than 20 ppmv, dry basis as hexane at 3% O₂ established by an initial and subsequent annual source tests per 40 CFR 60.8 and using test methods in Rule 1150.1(j)(1). The annual source test shall be conducted no later than 45 days after the anniversary date of the initial source test.

Rule 1150.1(d)(1)(C)(v)- Route the collection gas to a treatment system that processes collection gas for subsequent sale or use. All emissions from any atmospheric vent shall be subject to the requirements of (d)(1)(C)(i).

Rule 1150.1(d)(3)-Owner or operator of existing gas collection and control systems who modify them to meet requirements of this rule shall submit for approval an amendment of the existing design plan to include updates or addenda. Design plan amendments shall be prepared by a PE.

Rule 1150.1(d)(10)- TOC as methane \leq 5% by volume in subsurface refuse boundary sampling probes for detecting lateral migration of LFG away from waste mass.

Rule 1150.1(d)(11)- TOC as methane \leq 25 ppmv from integrated samples taken on numbered 50,000 sq foot landfill grids.

Rule 1150.1(d)(12)- TOC as methane \leq 500 ppmv above background by instantaneous monitoring at any location on the landfill except at outlet of a gas control device.

Rule 1150.1(d)(13)- TOC as methane \leq 500 ppmv at any component under positive pressure. If exceeded, must be tagged and repaired within 10 calendar days.

Rule 1150.1(d)(14)- All valves in gas collection and control system shall be closed \leq 1 hour after breakdown or reasonably knew or should have known.

Rule 1150.1(d)(16)- Wellheads gauge pressure shall be under constant vacuum, except during (A) wellhead raising or (B) during repair or temporary shutdown due to catastrophic event, during repair to connect collection components, and for permitted construction included in the design plan and emissions are minimized.

Rule 1150.1(d)(17)- Install and maintain 3-cup wind speed assembly (0-50mph, min <0.75mph) and a vane (0-540° azimuth, +/-2°) direction monitoring system w/continuous recorder at representative site.

Rule 1150.1(d)(18)- Comply w/ 27CCR, subchapter 5 Sect. 21140 (Attachment B)

Rule 1150.1(d)(19)- Comply w/ Sect. 20200 SWRCB 27CCR, Article 2 (Attachment C).

Rule 1150.1(d)(20)- Comply w/ 40 CFR 63 Subpart AAAA.

Rule 1150.1(e)(1)- Monitor and sample per Attachment A for TOC and TAC each month from subsurface refuse boundary sampling probes.

Rule 1150.1(e)(2)- Collect monthly integrated samples per Sect. 2, Attachment A for TOC and TAC from landfill surface.

Rule 1150.1(e)(3)-Instantaneous surface monitoring per Sect. 3, Attachment A for TOC each quarter. If no readings exceed 500 ppmv for last 4 consecutive quarterly monitoring events, with approval, may monitor annually. TOC \geq 500 without remedy w/in 10 days shall return to quarterly monitoring. (A) Exceedance shall be marked on a topographic map or identified by GPS and recorded per Sect. 3.4, Attachment A. (B) Corrective action (cover maintenance/repair, well vacuum adjustments) shall be taken and remonitored within 10 days after exceedance. (C) If remonitoring shows a third exceedance it is violation unless a new/replacement well is needed and replaced \leq 45 days after third exceedance.

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Rule 1150.1(e)(4)- If wellheads show positive pressure: (A)Initiate corrective action w/in 5 days. (B) If within 15 days it is not corrected, initiate further action (expansion). (C) Corrective actions must be completed and new wells must be operational within 120 days of first positive pressure reading. (D) Gauge pressure shall be determined by approved device and calibrated and operated per manufacturer's specs.

Rule 1150.1(e)(5)- Collect and analyze monthly LFG sample per Sect. 4.0, Attachment A for TOC and TAC from main gas collection header line entering control systems.

Rule 1150.1(e)(6)- Collect and analyze monthly LFG sample per Sect. 5.0, Attachment A for TOC and TAC from landfill property boundary.

Rule 1150.1(e)(7)(B)- Open flares or non-combustion systems shall provide information of operation, parameters indicating proper performance, and monitoring procedures.

Rule 1150.1(e)(7)(C)- Quarterly monitoring for leaks for components under positive pressure. Component must be tagged and repairs in 10 calendar days. Gas to energy facilities may leak test prior to scheduled maintenance or during planned outages.

Rule 1150.1(f)- All records shall be kept up to day, readily accessible and maintained for at least 5 years.

Compliance is expected.

Reg XIII: Rule 1303(a)- There is no increase of emissions, BACT is not required.
Rule 1303(b)(1)- There is no increase of emissions, modeling is not required.
Rule 1303(b)(2)- There is no increase of emissions. Since the facility is an essential public service, any required offsets shall be provided through priority reserve.
Compliance with Regulation XIII is expected.

Rule 1401: Toxic Air Contaminants
Rule 1401(d)- There is no increase in emissions associated with this equipment.
Compliance is expected

Rule 1401.1: Rule 1401.1(b)- Equipment is exempt since it is located at an existing facility.

40 CFR Part 60 Subpart Cc- Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills

60.32c- Applicability: Applicable, construction (1986) commenced prior to 5/30/1991.

40 CFR Part 60 Subpart WWW- Standards of Performance of Municipal Solid Waste Landfills

60.750- Applicable. This landfill commenced construction (1986), reconstruction, or modification (expansion-1991, 2001, and 2009) on or after May 30, 1991.

60.752(b)(1)- (ESL: 3.3 million MG/year) Comply with paragraph (b)(2) or calculate NMOC emission rate per 60.754, and recalculated annually, except if annual report to indicates < 50 Mg/year in each of the next 5 consecutive years, then may submit 5-year NMOC emission rate estimate instead.

The estimate includes current amount of solid waste-in-place, estimated NMOC emission rate, and estimated waste acceptance rate for each year, with all data and calculations. If actual acceptance > estimated, submit a revised 5-year estimate beginning with the year with the exceeded estimate.

MSW LF design capacity \geq 2.5 million Mgrams and 2.5 million cubic meters is subject to part 70 or 71 permitting requirements.

60.752(b)(2)- NMOC emission rate \geq 50Mg/year (ESL PTE: 58.28 Mg/yr)

60.752(b)(2)(i)- Submit a collection/control system design plan prepared by a PE within 1 year, which shall: (A)- meet (b)(2)(ii); (B)- include alternatives to operational

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standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 60.753-60.758; (C)- have a design plan per 60.759 active specifications or include a demonstration to Administrator's satisfaction of the alternatives; (D)- have submitted information for Administrator for approval.

60.752(b)(2)(ii)- Install a LFG collection/control system within 30 months after the first annual report with emissions ≥ 50 Mg/year, unless Tier 2 or Tier 3 sampling demonstrates emission rates < 50 Mg/year per 60.757(c)(1) or (2).

(A)Active collection shall: (1)- Be designed to handle maximum expected gas flow rate from entire area that is for a gas control/treatment system; (2)(i)-Collect gas from each area, which the initial solid waste has been placed for 5 or more years; (3)- Collect gas at sufficient extraction rate; (4)- Be designed to minimize off-site migration.

60.752(b)(2)(iii)(B)(2)-Route all collected gas to control system to reduce NMOC by 98% by weight or reduce outlet NMOC concentration < 20 ppmv, dry as hexane @3% O₂. Reduction efficiency or ppmv shall be established by an initial performance test to be completed no later than 180 days after initial startup per test methods in 60.754(d). Control device shall be operated within parameter ranges established during initial or most recent performance test and monitored per 60.756.

60.752(b)(2)(iv)- Collection/control device shall comply with 60.753, 60.755, and 60.756.

60.752(b)(2)(v)- Collection/control system may be capped or removed if: (A) LF is closed (see 60.751 definition) with closure report per 60.757(d); (B) Collection/control system operated at least 15 years; and (C) The calculated NMOC < 50 Mg/year on 3 successive test dates, within 90-180 days apart, per 60.754(b).

60.753(a)- Operate collection system from areas in which solid waste has been in place for ≥ 5 years (active).

60.753(b)- Operate collection system with negative pressure at each wellhead except for:

- (1) A fire or increased well temperature. Record instance of positive pressure.
- (2) Use a geomembrane or synthetic cover. Develop acceptable pressure limits.
- (3)- A decommissioned well.

60.753(c)- Operate each interior wellhead in collection system with LFG temperature $< 55^{\circ}\text{C}$ and with either N₂ level $< 20\%$ or O₂ level $< 5\%$. Higher operating value (HOV) demonstration shall show supporting data that elevated parameters do not result in fire, or significantly inhibit anaerobic decomposition.

60.753(d)- Methane concentration < 500 ppm above background at the LF surface. Shall conduct surface testing around perimeter of collection area and along pattern that traverses LF at 30meter intervals and where visual observations indicate elevated concentration of LFG (cracks, seeps, distressed vegetation). Alternative traversing pattern acceptable. A surface monitoring design plan shall be developed that include a topographical map with monitoring route and rationale for deviations. Areas with steep slopes or other dangerous areas may be excluded from surface testing.

60.753(e)- All collected gases shall be vented to a control system per 60.752(b)(2)(iii). If collection/control system inoperable, blowers, valves, etc. shall be closed within 1 hour.

60.753(g)- If monitoring demonstrates that operational requirements are not met, corrective actions shall be taken per 60.755(a)(3) through (5) or 60.755(c).

60.754(a)-(1) Calculate NMOC emission rate per 60.754(a)(1)(i) or (ii); (2)-Tier 1; (3)-Tier 2; (4)-Tier 3; (5)-May used other methods if approved by Administrator.

60.754(b)-When in compliance with 60.755, calculate NMOC emission rate to determine when system can be removed per 60.752(b)(2)(v) equation.

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60.754(c)- Calculate emissions for PSD major source and significant levels per 51.166 or 52.21 using AP-42 or other approved methods.

60.755(a)(3)- To demonstrate compliance with sufficient LFG collection flow rate per 60.752(b)(2)(ii)(A)(3), measure gauge pressure in gas collection header at each individual well, monthly. If positive pressure, initiate action within 5 calendar days, except for 60.753(b). If can't achieve negative pressure without excess air within 15 calendar days of first measurement, expand gas collection system within 120 days of initial positive pressure measurement.

60.755(a)(4)- Expansion of gas collection system is not required during the first 180 days after gas collection system startup.

60.755(a)(5)- Monitor each well monthly for temperature and N₂ or O₂ per 60.753(c) for excess air infiltration determination. If exceedance occurs, action shall be initiated to correct exceedance within 120 days of initial exceedance.

60.755(b)- Place each well and design component in the approved design plan. Install each well no later than 60 days after the date on which the initial solid waste has been in place for 5 years or more.

60.755(c)(1)- Monitor surface concentrations of methane along entire perimeter of the collection area and along a pattern that traverses the LF at 30meter intervals (or site-specific spacing) for each collection area on a quarterly basis using an OVA, FID, or other portable monitoring per specs in (d).

60.755(c)(2)- Determine background concentration by moving probe inlet upwind and downwind outside the LF boundary at least 30meters from perimeter wells.

60.755(c)(3)- Surface monitoring shall be performed per 4.3.1 of Method 21 of Appendix A of this subpart, with probe inlet within 5 to 10 centimeters of ground.

60.755(c)(4)- Any reading ≥ 500 ppm above background shall be a recorded exceedance.

(i)- Location of exceedance marked and recorded.

(ii)- Cover maintenance or adjustments to vacuum of adjacent wells to increase gas collection in vicinity of each exceedance and re-monitored within 10 calendar days.

(iii)- If re-monitoring shows a second exceedance, additional corrective action shall be taken and monitored again within 10 days of second exceedance. If a third exceedance for same location, then proceed with (c)(4)(v).

(iv)- Any location with an initial exceedance but has a methane concentration < 500 ppm methane above background at the 10-day re-monitoring shall be re-monitored 1 month from initial exceedance. If the 1-month remonitoring shows < 500 ppm above background, no further monitoring is required at that location until next quarterly period. If 1-month re-monitoring shows exceedance, proceed with (c)(4)(iii) or (v).

(v)- Any location where monitored methane concentration ≥ 500 ppm above background 3 times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of initial exceedance. Alternative remedies (upgrading blower, header pipes, or control device and timeline for installation may be submitted to Administrator for approval.

60.755(c)(5)- Implement a program to monitoring for cover integrity and implement cover repairs as necessary on a monthly basis.

60.755(d)-Follow instrument specs and procedures for surface emission monitoring.

60.755(e)- Provisions of this subpart apply at all times, except during start-up, shutdown, or malfunction, which shall not exceed 5 days for collection systems and 1 hour for treatment or control devices.

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60.756(a)- Install sampling port and temperature measuring device at each wellhead. Measure gauge pressure, N₂ or O₂, and temperature of LFG monthly.

60.756(b)- Calibrate, maintain, and operate enclosed combustor per manufacturer's specifications: (1) A temperature monitoring device with a continuous recorder with at least +/-1% accuracy or +/- 0.5°C, whichever is greater. (2) A device that records flow at least every 15 minutes to or secure bypass line valve in the closed position with a car-seal or lock and key configuration of the control device. Inspect valve visually monthly.

60.757-Submit amended design capacity report to Administrator within 90 days of increase of maximum design capacity; NMOC emission rate report annually or submit 5-year estimates; collection and control system design plan; exceedance report, initial performance test report, including diagrams, data, documentation of equipment, materials, and gas flow rates.

60.758-Keep records ≥ 5 years and keep an up-to-date accessible plot map of the system.

The facility has an active gas collection system and routes the gas to a control system (flares) with minimum 98% NMOC destruction efficiency and/or a treatment system (engine pretreatment) that processes the gas prior to use in the LFG fired engines. Per May 23, 2005 letter from Mr. Duane James of EPA to Mr. Steve Hamilton, the engines/gen sets "are not subject to the control requirements of 40 CFR 60.752(b)(2)(iii)(B) [98%/20 ppm] and the associated monitoring, record keeping, and reporting for such control devices. Compliance with this regulation is expected.

40 CFR Part 63 Subpart AAAA- National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Facilities

63.1935- This subpart is applicable. The facility is subject to this subpart and complies through compliance with 40 CFR 60, Subpart WWW.

Reg. XXX: Replacing a blower and upgrading storage tanks of a landfill gas flaring system; adding and/or removing gas collection vertical wells and horizontal collectors; and adding a condensate sump, five optional condensate sumps, and five optional sumps for the LCRS collection system, and the conversion of a condensate tank into a subdrain liquids tank, and three leachate tanks into leachate and condensate tanks is considered a Title V Minor permit revision under Rule 3000(b)(15), since there is no emission increase and the modification of the equipment does not result in new or additional NSPS or NESHAP requirements and will be subject to an EPA review (Rule 3003 (j)). A public notice is not required. Compliance is expected.

Conclusions & Recommendations

The equipment is in compliance with all the applicable Rules and Regulations of the SCAQMD. A Permit to Operate and Permits to Construct/Operate are recommended for applications 537512, 537513, and 537514, respectively. For Permit Conditions please see Sample Permit. A revised Title V permit is recommended after EPA review.